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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,008	08/22/2003	Sung-Jae Moon	PNK0048US	8963
23413 7590 10/22/2009 CANTOR COLBURN, LLP 20 Church Street 22nd Floor Hartford, CT 06103				
EXAMINER NGUYEN, HOAN C				
ART UNIT 2871		PAPER NUMBER		
NOTIFICATION DATE 10/22/2009		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

### Office Action Summary

**Application No.**

10/646,008

**Applicant(s)**

MOON, SUNG-JAE

**Examiner**

HOAN C. NGUYEN

**Art Unit**

2871

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 34-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 34-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CI/CD)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 09/29/09

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/29/2009 has been entered.

Claims 1-33 are cancelled. New claims 34-46 are added.

Examiner would like to remind that Applicant's election without traverse of Group I and First embodiment (Fig. 6) in the reply filed on 16 March 2005 is acknowledged.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features:

- "a driving signal wire 322/321 which transmits driving signals from an outside of the substrate to the gate driver and which comprises a first protrusion portion (there is no first protrusion shown in Figure 6) extended toward the gate pad, wherein the gate pad 95 comprises a second protrusion portion 122 extended

toward the driving signal wire and the first protrusion portion is adjacent to and insulated from the second protrusion" as cited in claim 34.

- "a flexible printed circuit connected to the substrate and comprising a first driving pad" as cited in claim 36.
- "the gate driver comprises a second driving pad connected the driving signal wire" as cited in claim 37.
- "each of the plurality of first connecting portions is divided into two parts" as cited in claim 39.
- "each of the plurality of second connecting portions is divided into two parts" as cited claim 40.
- "a flexible printed circuit connected to the substrate and comprising a first driving pad and a second driving pad" as cited claim 42.

must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 34-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

New claim 34 cites "a driving signal wire 322/321 which transmits driving signals from an outside of the substrate to the gate driver and which comprises a first protrusion portion extended toward the gate pad, wherein the gate pad 95 comprises a second protrusion portion 122 extended toward the driving signal wire and the first protrusion portion is adjacent to and insulated from the second protrusion." There is no first protrusion extended toward the gate pad 95, wherein the first protrusion portion is

adjacent to and insulated from the second protrusion shown in Figures 6 or 8. There is no second protrusion extended toward the driving signal wire, wherein the first protrusion portion is adjacent to and insulated from the second protrusion shown in Figure 6 or 8. Therefore, this feature of new claim 34 is new subject matter.

New claim 36 cites the feature "a flexible printed circuit 510 connected to the substrate and comprising a first driving pad", which does not disclose in the original disclosure. Therefore, this feature of new claim 34 is new subject matter.

New claim 37 cites the feature "the gate driver 440 comprises a second driving pad C3 connected the driving signal wire", which does not disclose in the original disclosure. Therefore, this feature of new claim 37 is new subject matter.

New claim 42 cites "a flexible printed circuit 510 connected to the substrate and comprising a first driving pad and a second driving pad", which does not disclose in the original disclosure. Therefore, this feature of new claim 42 is new subject matter.

Claims 35 and 38 are rejected since they depend on the infinitive claims 34 and 37. Claims 42-46 are rejected since they depend on the infinitive claim 42.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 39-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

New claim 39 cites "each of the plurality of first connecting portions is divided into two parts", what are these "two parts" of first connecting portion? Figure 6 shows that the first connecting portion 94A is not divided into two parts.

New claim 40 cites "each of the plurality of second connecting portions is divided into two parts" what are these "two parts" of second connecting portion? Figure 6 shows that the second connecting portion 94B is not divided into two parts.

Claims 41-46 are rejected since they depend on the infinitive claim 40.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 39-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Jeon (US20030117536A1).

Jeon discloses (Figs. 1 and 9) a liquid crystal display device comprising:

Claim 39:

- a substrate;
- a plurality of gate drivers (integrated circuit 18) disposed on the substrate [paragraph 5];

- a plurality of gate lines GL respectively connected to the plurality of gate drivers, each of the plurality of gate lines comprising a gate pad;
- a plurality of data lines DL disposed substantially perpendicular to the plurality of gate lines; a plurality of thin film transistors, each of the plurality of thin film transistors 10 connected to one of the plurality of gate lines and one of the plurality of data lines;
- a plurality of pixel electrodes (inherently) respectively connected to the plurality of thin film transistors;
- a first driving signal wire 54a which transmits driving signals from an outside of the substrate to the plurality of gate drivers, and
- a plurality of first connecting portions 90 disposed between the first driving signal wire and the gate pad of each of the plurality of gate lines, a first end of each of the plurality of first connecting portions is connected to the first driving signal wire and a second end of each of the plurality of first connecting portions is connected to the gate pad and each of the plurality of first connecting portions is divided into two parts.

Claim 40:

- a second driving signal wire 54b which transmits driving signals from an outside of the substrate to the plurality of gate drivers; and
- a plurality of second connecting portions 90 disposed between the second driving signal wire and the gate pad of each of the plurality of gate lines, wherein a first end of each of the plurality of second connecting portions connect to the first



driving signal wire and a second end of each of the plurality of second connecting portions connects to the gate pad and each of the plurality of second connecting portions is divided into two parts.

wherein

Claim 41:

- the first driving signal wire and the second driving signal wire are separated from the plurality of gate lines, the plurality of data lines, the plurality of thin film transistors, and the plurality of pixel electrodes.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOAN C. NGUYEN whose telephone number is (571)272-2296. The examiner can normally be reached on MONDAY-THURSDAY:8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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